WHAT IS CLAIMED

1   1. Apparatus for performance-monitoring of a synchronous optical network

2   standard signal comprising:

3   means supplied with the standard optical signal for converting the standard

4   optical signal to an electrical signal;

5   means for separating from said electrical signal the framing signal portion

6   thereof and leaving in its time slot the noise that was on the framing signal; and

7   means for separating selectively for inspection such noise from the data

8   power for use as a measure of the quality of the standard optical signal.

1   2. The apparatus of claim 1 in which the means for separating the noise from

2   the data includes a squaring circuit for increasing the discrimination between the

3   relatively low noise power and the relatively high data power, and a low pass

4   filter circuit for passing selectively the noise power to a display for viewing.

1   3. The apparatus of claim 2 in which the squaring circuit is a diode.

1   4. The apparatus of claim 1 in which the means for separating the framing

2   signal from its noise is a notch filter.

1   5. The apparatus of claim 4 in which the framing signal is separated from the

2   noise in its time slot by a low pass filter including two 50 ohm lengths of

3   transmission line and two one-quarter wavelength stubs of such a transmission

4   line, of which one is shorter and the other open-ended.

1   6. The apparatus of claim 2 in which the means for separating the framing

2   signal power from the noise power in its time slot is a notch filter.

1   7. The process for performance monitoring of a SONET standard signal

2   comprising the steps of converting the signal into an electrical signal, separating

3   from said electrical signal the framing signal in a manner to leave the noise in

4   the framing signal time slot and the data power essentially undisturbed, and

5   displaying the noise power in the framing time slot of the separated signal.

1   8. The process of claim 5 in which before its display the separated signal is

2   treated to increase the difference in level of the noise power in the framing slot

3   and the data power of the signal.